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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,973	02/18/2004	Ilya Ostrovsky	DNAG-278 (10402028)	1039

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EXAMINER	
LEADER, WILLIAM T	

ART UNIT	PAPER NUMBER
1795	

MAIL DATE	DELIVERY MODE
12/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/781,973	OSTROVSKY, ILYA	
	Examiner	Art Unit	
	WILLIAM T. LEADER	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *63-74* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *63-74* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 21, 2008 has been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

3. The disclosure is objected to because of the following informalities: The specification is required to include a brief description of the several views of the drawings. See 37 CFR 1.74 and MPEP 608.01(f). See also MPEP 608.01(a), arrangement of application.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. Claims 63-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan (6,916,414) in view of Schaedel (4,152,221) or Honda et al (6,690,573) or Covino (4,861,440) and further in view of the Lowenheim text *Electroplating* for the reasons of record.

5. As indicated in previous office actions, the Dolan patent is directed to a process for anodizing light metals such as aluminum and magnesium (column 1, lines 15-16). The process includes the steps of providing the light metal article, placing the article as an anode in an anodizing solution, providing a cathode electrode in the solution and passing an electric current between the article and the cathode electrode. See column 2, lines 46-56. These steps correspond to the process steps recited in instant claims 63-66. The anodizing solution may comprise a water-soluble phosphorus oxysalt and/or water-soluble alkali metal hydroxides (column 2, lines 25-45). In one embodiment, the solution contains a phosphate and/or a soluble amine such as an alkanolamine. The pH of the anodizing solution is neutral to basic, preferably about 7.1 to 12. See column 4, line 63 to column 5, line 27. Table 1 at columns 10 and 11, shows that in examples 1 and 2, an anodizing solution containing phosphoric acid, sodium or potassium hydroxide and triethanolamine was used. The solution of these examples includes all constituents of the bath recited in instant claims 63-66 except for a surfactant. With the solution of Dolan,

the generation of a sustained plasma (visible light emitting discharge) during anodization may be attained using a pulsed DC voltage in some instances of no more than 80 volts. See column 5, lines 28-35. In example 1 the average voltage at which a sustained plasma was observed was 60-80 volts, while in example 2 the voltage at which a sustained plasma was observed was 110-130 volts.

6. As noted above, claim 63 differs from the process of Dolan by reciting the inclusion of at least one surfactant. The Schaedel patent is directed to an anodizing process. Schaedel teaches the inclusion of a surfactant in the anodizing solution to form an oxygen-holding foam around the part being anodized. See the abstract. The Honda et al patent is directed to a method for producing an aluminum electrolytic capacitor, and discloses that it is known to anodize aluminum anode foil (column 1, lines 12-15). Honda et al teaches that a surfactant has been added for the purpose of increasing a spark generating voltage of an electrolytic solution, and improving anodizing performance (column 1, lines 39-42). The Covino patent is directed to the electrolytic formation of an aluminum oxide surface by anodizing. See the abstract. Covino teaches that a conventional wetting agent (surfactant) can be added to the anodizing bath (column 3, lines 47-51). Additionally, Covino teaches that an outer layer of silicone may be applied to the aluminum oxide (column 1, lines 40-46).

7. The Lowenheim text teaches that wetting agents (surfactants) are used to reduce the surface tension of water (pages 520-521). Lowenheim also teaches that surfactants are used to promote disengagement of bubbles on a surface being electrolytically treated (page 135).

8. The prior art of record is indicative of the level of skill of one of ordinary skill in the art. It would have been obvious at the time the invention was made to have included a surfactant in the anodizing solution of Dolan as taught by Schaedel, or Honda et al or Covino because the anodizing performance of the solution would have been improved, and the solution would have made better contact with the article being anodized as shown by the Lowenheim text.

9. With respect to claim 67, Dolan discloses that direct current is preferably used, although alternating current may also be used (column 4, lines 7-11). As indicated above, Dolan teaches that the article is made the anode. With respect to claim 68, Dolan discloses that the article is subjected to a cleaning and/or degreasing step before being subjected to anodic treatment (column 9, lines 26-28). With respect to claim 69, Dolan discloses that after cleaning the article is preferably rinsed with water (column 9, lines 33-34). With respect to claim 70, current density is a result-effective variable. Choice of an appropriate current density to achieve a desirable anodized coating would have been a matter of routine optimization in accordance with the teaching of Dolan. With respect to claim 71, Dolan discloses

that the anodizing solution is preferably maintained at a temperature between about 5 and 90 °C. This range significantly overlaps that recited by applicant. Choice of values from within the range disclosed by Dolan would have been obvious. With respect to claim 72, in examples 1-4 Dolan discloses that the rate of film deposition was approximately 10-15 microns per minute, and that current was applied for approximately 2 minutes. This would give a thickness of 20-30 microns. In example 5, a coating of 2.5 microns was produced. These values fall within the range recited by applicant. Instant claim 73 recites an additional coating. Dolan discloses that the protective coatings produced on the surface of the light metal article may, after anodization, be subjected to further treatments such as painting, sealing, and the like. New claim 74 is considered further limit the electroless deposited metal recited in the Markush group of claim 73 to a nickel rich coating, thus limiting the scope of the Markush group. Elements of the Markush group, such as paint, are suggested by Dolan.

Double Patenting

10. Claims 63-74 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-63 of U.S. Patent No. 6,875,334 in view of Kinase et al (4,416,742) for the reasons of record.

11. Claim 1 of the '334 patent recites a process for anodizing using a solution which contains hydroxylamine, phosphate anions, a nonionic surfactant, and an alkali metal hydroxide. The solution used in the method of the instant claims contains an alcohol showing at least one alkaline radical group. Triethanolamine is an alcohol falling within the scope of this limitation. Kinase et al discloses that both triethanolamine and hydroxylamine are recognized additives for use in coating baths. It would have been obvious to have utilized triethanolamine in place of the hydroxylamine recited in the claims of the '334 patent because Kinase et al shows them to be equivalent additives.

Response to Arguments

12. Applicant's arguments have been fully considered but they are not persuasive. At page 7, applicant argues that Dolan does not add any surfactant or any alcohol to any of his examples, but he adds triethanolamine. Paragraph [0027] of applicant's specification discloses that the alcohol added to applicant's anodizing solution is preferably at least one compound selected from the group consisting of mono-, di- or tri-alkanolamines. As noted above, Table 1 at columns 10 and 11 of Dolan shows that in examples 1 and 2, the anodizing solution contained triethanolamine as well as phosphoric acid and sodium or potassium hydroxide. The triethanolamine used by Dolan et al is a tri-alkanolamine. Thus, contrary to

applicant's argument, Dolan et al clearly disclose the inclusion of an alcohol, which is one of applicant's preferred alcohols, in the anodizing solution.

13. Applicant has added the limitation that a layer containing non-conductive polymer of the metallic surface is formed and transformed to a gel layer. Paragraph [0014] of applicant's specification discloses that the non-conductive polymer may be any electrically non-conductive oligomeric or polymeric compound, and that its polymerization degree may be quite low. A polyphosphate present during the anodizing may be formed in the anodizing solution. Claim 1 recites the inclusion of a phosphorus and oxygen containing anion. Dolan meets this limitation. A polyphosphate would be expected to form in the anodizing process of Dolan in the same way as it does in applicant's process.

14. At paragraph [0059] of applicant's specification it is stated that "any anodizing process may have a stage of gel formation." In paragraph [0062] it is stated that "During the anodizing, plasma arcs and a gel micelles containing gel layer are generated. The gel micelles are present when current is applied and when there is an electrical field." The operative process steps suggested by the applied references are the same as those utilized by applicant for treating a metal surface. With the treatment solution of Dolan, the generation of a sustained plasma (visible light emitting discharge) during anodization may be attained using a pulsed DC voltage in some instances of no more than 80 volts. See column 5, lines 28-35.

Since a plasma is formed by Dolan, a gel would have been expected to have formed in the same way a gel forms when plasma arcs are formed during the anodizing process of applicant. Applicant has offered no explanation as to why a gel is formed in the claimed process but would not have been formed in the process suggested by Dolan and the other applied references.

15. Claim 1 as amended recites that the gel layer is stabilized with the aid of least one alcohol. As explained above, in examples 1 and 2, Dolan includes triethanolamine (a tri-alkanolamine) which, based on applicant's specification, is a preferred alcohol. Stabilization would be expected to occur in the process of Dolan in the same manner it does in the process of applicant.

16. On page 8 of the Remarks, applicant argues that the use of triethanolamine in place of hydroxylamine is not obvious. Applicant points out that hydroxylamine is an inorganic compound while triethanolamine is an organic compound. While this may be correct, Kinase discloses that these compounds may be equivalently used as an additive in a coating bath. Based on this disclosed equivalence, substitution of one for the other would have been obvious.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM T. LEADER whose telephone number

is (571) 272-1245. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harry D Wilkins, III/
Primary Examiner, Art Unit 1795

/William Leader/
December 5, 2008